



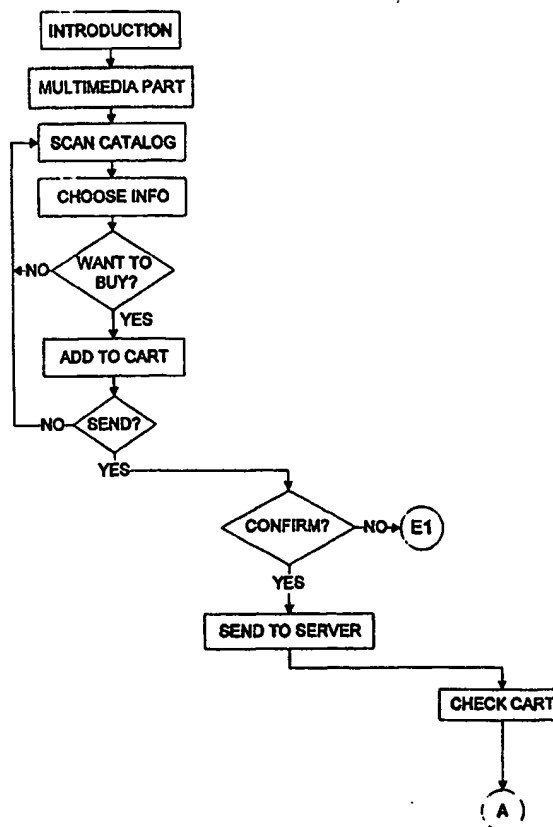
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(21) International Application Number: PCT/FI98/00546 (22) International Filing Date: 22 June 1998 (22.06.98) (71) Applicant (for all designated States except US): SONERA OYJ [FI/FI]; Sturenkatu 16, FIN-00510 Helsinki (FI). (72) Inventor; and (75) Inventor/Applicant (for US only): RINNE, Mika [FI/FI]; Malminraitti 16 C 12, FIN-00700 Helsinki (FI). (74) Agent: PAPULA REIN LAHTELA OY; Fredrikinkatu 61 A, P.O. Box 981, FIN-00101 Helsinki (FI).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  Published With international search report. In English translation (filed in Finnish).

(54) Title: METHOD AND SYSTEM FOR PROVIDING SERVICES IN THE TELECOMMUNICATION SYSTEM

## (57) Abstract

Procedure for implementing a service in a telecommunication system comprising a terminal (PC), such as a computer system or equivalent, which communicates with a network server (10) and a bank server (B) via a telecommunication network (1), said terminal (PC) comprising input means (11) for entering user input data to the system; a mass storage unit (C); a transportable mass storage medium (CD); and display means (12) for presenting visual information to the user. According to the invention, a multi-media catalogue (D) stored on the transportable mass storage medium (CD) is read from the mass storage unit (C) to the terminal (PC), by means of which the multi-media catalogue (D) is presented; a given product presented in the multi-media catalogue (D) is selected and a telecommunication connection from the terminal (PC) to the network server (10) is set up; and the selected product is ordered from the network server (10).



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# METHOD AND SYSTEM FOR PROVIDING SERVICES IN THE TELECOMMUNICATION SYSTEM

The present invention relates to a procedure as defined in the preamble of claim 1 and to a system  
5 as defined in the preamble of claim 9 for implementing a service in a telecommunication system.

In prior art, a known practice is to order products by mail. The desired products are selected by leafing through a mail-order catalogue. An order is  
10 placed by filling in an order form, including the delivery address, invoicing data and the order numbers of the products ordered. The customer sends the order form to the seller, who delivers the ordered product based on the information in the order form.

15 A prior-art technique is to use WWW applications (World Wide Web, WWW) for advertising and sale of different products. At present, WWW applications are commonly implemented using the HTML language (Hypertext Markup Language, HTML) form structures. The  
20 user of a WWW browser is presented a WWW page containing a number of control elements, such as push buttons, text fields or lists. Data are entered using the control elements, whereupon they are approved by pressing a push button reserved for this purpose. The data  
25 are transmitted collectively to a WWW application disposed in conjunction with a WWW server. The WWW application may be e.g. a CGI application, i.e. an application consistent with the CGI specification (Common Gateway Interface, CGI). The application processes the  
30 input data, performs the required functions and returns a WWW page. Instead of a CGI application, NS-API functions (Netscape Application Programming Interface, NS-API) are also used.

A known technique is to order products via  
35 WWW pages created in the Internet. The customer establishes a telecommunication connection with an

"Internet shop", browses the available product range and places an order.

Another prior-art technique is to publish product range information, catalogues and advertisements stored on a transportable mass storage medium. In this ways, the information can be packed in a small space and it can be viewed e.g. using a computer system. A preferred example of a transportable mass storage medium is the CD-ROM.

10 A problem with the above-mentioned method of ordering products via WWW pages is that the customer must have a telecommunication connection with the seller's WWW server all the time while ordering and viewing the product range. Network capacity is wasted on  
15 browsing the products while trying to make a decision. Moreover, viewing the product range using a WWW browser is a slow business.

Further, ordering via a mail-order system is a slow method and mail-order catalogues are expensive  
20 to produce and distribute. Mail-order catalogues are not a good solution from the viewpoint of environmental protection. Besides, catalogues cannot be used to present sound or video. However, a presentation with sound and/or video is preferable for many products.

25 In the case of advertising disks and product catalogues, the problem is that the ordering of the products advertised and presented must be done in a different system than the viewing of the products.

The object of the present invention is to  
30 eliminate the drawbacks described above or at least to significantly alleviate them.

A specific object of the invention is to produce a new type of procedure and system for a multimedia catalogue that functions both as a pictorial  
35 product catalogue and as an ordering base for the ordering of products via the WWW.

As for the features characteristic of the invention, reference is made to the claims.

In the procedure of the invention for implementing a service in a telecommunication system, the system comprises a terminal. The terminal is preferably e.g. a computer system or equivalent. Furthermore, the terminal comprises input means which can be utilised by the user to communicate with the system. In addition, the terminal comprises display means for displaying text, graphics, animations and/or video. Moreover, the terminal comprises a mass storage unit for reading information stored on a transportable mass storage medium. Further, the telecommunication system of the invention comprises a telecommunication network, over which the terminal, a network server and a bank server communicate with each other.

According to the invention, a multi-media catalogue stored on the transportable mass storage medium is read from the mass storage unit to the terminal, by means of which the multi-media catalogue is presented. Further, according to the invention, a given product presented in the multi-media catalogue is selected and a telecommunication connection from the terminal to the network server is set up. Further, according to the invention, the selected product is ordered from the network server.

In an embodiment of the procedure, the products to be ordered are picked from the multi-media catalogue and placed on an order list, and a telecommunication connection to the network server is set up after the products to be ordered have been entered in the order list. Thus, the telecommunication network is not burdened until all the products to be ordered have been stored on the order list. Products included in the list can also be deleted from the list.

In an embodiment of the procedure, a telecommunication connection is set up from the terminal to a

server. that provides additional information about a product presented in the multi-media catalogue. The server providing additional information is e.g. the server that maintains the WWW page of the manufacturer  
5 of the product presented in the multi-media catalogue.

In an embodiment of the procedure, videos are included in the multi-media catalogue.

In an embodiment of the procedure, sound is included in the multi-media catalogue.

10 In an embodiment of the procedure, competitions and/or pastimes and/or advertisements and/or notices are included in the multi-media catalogue. A competition is implemented e.g. by allotting a product presented in the multi-media catalogue as a prize for  
15 the winner.

In an embodiment of the procedure, the task of charging the customer for a product ordered is transmitted from the network server via the telecommunication network to a bank server.

20 In an embodiment of the procedure, the telecommunication network is the TCP/IP based Internet network.

The system of the present invention for implementing a service in a telecommunication system  
25 comprises a terminal, such as a computer system or equivalent, which communicates with a network server and a bank server via a telecommunication network. Furthermore, the terminal comprises input means for transmitting input data entered by the user to the  
30 system. Moreover, the terminal comprises a mass storage unit. Further, the terminal comprises display means for presenting visual information to the user. Further, the system comprises a transportable mass storage medium, such as a CD-ROM disk.

35 According to the invention, the system comprises means for reading the information stored on the transportable mass storage medium from the mass stora-

ge unit to the terminal. Further, according to the invention, the system comprises means for setting up a telecommunication connection from the terminal to the network server when a product in a multi-media catalogue is to be ordered. Further, according to the invention, the system comprises means for ordering a product from the network server.

In an embodiment of the system, the terminal comprises means for maintaining an order list and for gathering the products selected in the multi-media catalogue on the order list before the setup of a telecommunication connection to the network server. Products included in the order list can also be removed from the list.

In an embodiment of the system, the terminal comprises means for setting up a telecommunication connection from the terminal to a server that provides additional information about a product presented in the multi-media catalogue. The server providing additional information is e.g. the server that maintains the WWW page of the manufacturer of the product presented in the multi-media catalogue.

In an embodiment of the system, the terminal comprises sound reproduction means for presenting audio information to the user.

In an embodiment of the system, the system comprises means for transferring the task of charging the customer for an ordered product via the telecommunication network to the bank server.

The invention saves network capacity because signalling from the terminals is transmitted in the telecommunication network only when an order is made. The products are selected and examined by reading information from the mass storage unit by means of the terminal, without a network connection.

For instance, disks with a multi-media catalogue stored on them can be distributed together with

various papers or magazines. While browsing the multi-media catalogue, the customer can order a given product directly from the network server via the WWW.

Moreover, the invention saves network server  
5 capacity because the servers are only needed for as long as it takes to process the customer's order and the charging data.

A further advantage as compared with prior art is speed and ease of use.

10 In the following, the invention will be described in detail by the aid of a few examples of its embodiments, wherein

Fig. 1 presents an embodiment of the system of the invention, and

15 Fig. 2 presents a flow diagram representing the system in Fig. 1. Fig. 2 is divided into two sections. Fig. 2b continues the flow diagram from where Fig. 2a ends.

The telecommunication system presented in  
20 Fig. 1, which is a simple embodiment of the present invention, comprises a telecommunication network 1, which comprises a bank server B, a network server 10, a server A providing additional information about a product presented in a multi-media catalogue D, and  
25 equipment for presenting the multi-media catalogue. In this example, the equipment for presenting the multi-media catalogue is a computer system PC provided with a WWW browser and comprising a mass storage unit C for reading the multi-media catalogue D stored on a mass  
30 storage medium CD. Furthermore, the terminal PC comprises a keyboard 11, by means of which the input data entered by the user are transmitted to the system. Further, the terminal PC comprises a monitor with a graphics and/or video card 12, which is used to pre-  
35 sent text, graphics, animations, video and other visual information. In addition, the terminal is provided



with a sound card together with loudspeakers 13 for audio reproduction.

In an embodiment according to Fig. 1, a customer using the terminal PC orders a product presented in the multi-media catalogue D. The multi-media catalogue is read by means of the mass storage unit C from the transportable mass storage medium CD to the terminal PC. The multi-media catalogue D is presented to the customer by means of the terminal PC and the associated means of presentation 12, 13.

Moreover, the terminal PC comprises means 3 for setting up a telecommunication connection in accordance with the selections made in the multi-media catalogue. Further, the terminal PC comprises means 4 for ordering a selected product from the network server 10. In addition, the system comprises means 6 for charging the customer for the ordered product via the bank server B.

The means described in the example are implemented in a manner known in itself and are therefore not described in detail.

The actions comprised in the example are presented as a flow diagram in Fig. 2a, which is continued in Fig. 2b.

The customer using the terminal PC opens the multi-media catalogue D and reads instructions printed on the monitor 12 about how to use the multi-media catalogue (INTRODUCTION).

After the customer has read or skipped the instructions, the actual multi-media catalogue is activated (MULTIMEDIA PART) and the customer can browse the pictorial product catalogue (SCAN CATALOG). In the case illustrated by the example, the scanning of the product catalogue has been implemented by having a list of the products in the multi-media catalogue printed on the monitor 12. The list can be browsed e.g. using the arrow keys of the keyboard 11. The pro-

duct catalogue scanning part according to the example may include certain shortcut keys, search commands and other commands designed help the user find a given product.

5           To choose a particular product in the list, the customer selects it as an active product and presses a certain key (CHOOSE INFO) on the keyboard 11. The system now presents visual and audio information about the product via the monitor 12 and loudspeakers  
10 13. The customer is then asked whether he/she wants to order the product (WANT TO BUY?). If the customer does not want to buy the product, he/she will answer in the negative (NO), whereupon the program returns to the scanning function (SCAN CATALOG). If the customer does  
15 want to order the product presented, he/she will answer in the affirmative (YES), whereupon the selected product is added to the order list 5 (ADD TO CART). The terminal PC comprises means 7 for maintaining and storing the order list 5. In the case of the  
20 present example, these means 7 are implemented using a mass storage and software.

          The terminal PC asks the customer whether the orders stored in the order list 5 are to be sent further to the network server (SEND?). If the customer  
25 answers in the negative (NO), then the software will return to the catalogue scanning function (SCAN CATALOG). If the customer answers in the affirmative (YES), the WWW browser software will be activated in the terminal.

30           The WWW browser software asks the customer to confirm the order (CONFIRM?). If the customer answers in the negative (NO), then the WWW browser software will be closed and the scanning of the multi-media catalogue D, the pictorial product catalogue is resumed  
35 (E1). If the customer answers in the affirmative (YES), then a telecommunication connection to the network server 10 will be set up and the data regarding

the products stored in the order list are sent to the network server (SEND TO SERVER). The data are transmitted in the format required by the telecommunication network 1.

5           After the network server 10 has received the data regarding the products ordered, it will check whether the data are correct and whether there are such products in stock (CHECK CART).

          If the data are incomplete or the store has  
10 run out of the product ordered (PRODUCTS EXIST?) / (NO), the network server will send corresponding information to the user and close the telecommunication connection (E2). If all the data received by the network server 10 are correct and the product ordered is  
15 available in stock (PRODUCTS EXIST) / (YES), then the network server will send a message to the terminal PC. The terminal shows the customer the list of products ordered (SHOW CART).

          The customer is asked to accept the order for  
20 the products included in the list (ACCEPT?). If the customer answers in the negative (NO), then the order list 5 will be emptied and the system resumes the presentation of the multi-media catalogue (E3). If the answer is in the affirmative (YES), then the network  
25 server 10 will send an order form to the WWW browser for the customer to fill in (SEND ORDER). The order form is again transmitted in the appropriate format to the terminal PC.

          The customer fills in the order form on  
30 his/her terminal PC (FILL ORDER). In the case of the present example, the data to be filled in are the customer's name, information regarding the delivery, and information concerning the method of payment to be used to pay for the product ordered. The customer is asked  
35 whether he/she accepts the transmission to the network server 10 of the data he/she has given (ACCEPT?). At this stage, the customer still has a

chance to cancel the order by answering in the negative (NO), in which case the system will again resume with the multi-media catalogue and the network connection is closed (E4). After receiving an answer in the affirmative (YES), the WWW browser software will send the data in the form filled in to the network server 10.

Having received the order data, the network server registers the order (REGISTER) and sends information regarding the method of payment required by the network server to the customer. This information is displayed for the customer (SHOW INFO). After this, the customer is asked to confirm the method of payment (ACCEPT?), and if the answer is in the affirmative (YES), the payment data will be sent to the bank server B, which will take care of charging the customer on the basis of these data (PAYMENT). If the customer does not accept the method of payment (NO), then the system will again resume the presentation of the multi-media catalogue and close the network connection (E5).

If, in the case of the examples, the terminal PC is not connected to the telecommunication network 1, it is not possible to order products via the network server 10. However, products can be selected and stored in the order list 5. When the terminal PC is connected to the telecommunication network 1, an order can be sent to the network server 10 by reading the products stored in the order list 5.

It is to be noted in particular that the user interface as well as the visual and audio aspects of the multi-media catalogue can be implemented in many different ways.

The invention is not restricted to the examples of its embodiments described above, but many variations are possible within the scope of the inventive idea defined by the claims.

## CLAIMS.

1. Procedure for implementing a service in a telecommunication system, said system comprising a terminal (PC), such as a computer system or equivalent, which communicates with a network server (10) and a bank server (B) via a telecommunication network (1), said terminal (PC) comprising input means (11) for entering user input data to the system; a mass storage unit (C); a transportable mass storage medium (CD); and display means (12) for presenting visual information to the user, characterised in that a multi-media catalogue (D) stored on the transportable mass storage medium (CD) is read from the mass storage unit (C) to the terminal (PC), by means of which the multi-media catalogue (D) is presented; a given product presented in the multi-media catalogue (D) is selected and a telecommunication connection from the terminal (PC) to the network server (10) is set up; and the selected product is ordered from the network server (10).

2. Procedure as defined in claim 1, characterised in that the products to be ordered are gathered from the multi-media catalogue (D) and placed on an order list (5), and a telecommunication connection to the network server (10) is set up after the products to be ordered have been entered in the order list (5).

3. Procedure as defined in claim 1 or 2, characterised in that a telecommunication connection is set up from the terminal (PC) to a server (A) providing additional information about the product.

4. Procedure as defined in any one of claims 1 - 3, characterised in that videos are included in the multi-media catalogue (D).

5. Procedure as defined in any one of claims 1 - 4, characterised in that audio is included in the multi-media catalogue (D).

6. Procedure as defined in any one of claims 1 - 5, characterised in that competitions and/or pastimes and/or advertisements and/or notices are included in the multi-media catalogue (D).

7. Procedure as defined in any one of claims 1 - 6, characterised in that the task of charging the customer for a product ordered is transferred from the network server (10) via the telecommunication network (1) to the bank server (B).

8. Procedure as defined in any one of claims 1 - 7, characterised in that the telecommunication network is the TCP/IP based Internet network.

9. System for implementing a service in a telecommunication system, said telecommunication system comprising a terminal (PC), such as a computer system or equivalent, which communicates with a network server (10) and a bank server (B) via a telecommunication network (1), said terminal (PC) comprising input means (11) for entering user input data to the system; a mass storage unit (C); a transportable mass storage medium (CD); and display means (12) for presenting visual information to the user, characterised in that the system comprises means for reading a multi-media catalogue (D) stored on the transportable mass storage medium (CD) from the mass storage unit (C) to the terminal (PC); means (3) for setting up a telecommunication connection from the terminal (PC) to the network server (10) when a product selected in the multi-media catalogue (D) is to be ordered; and means (4) for ordering the product from the network server (10).

10. System as defined in claim 9, characterised in that the terminal (PC) comprises means (7) for maintaining an order list (5) and for

gathering the products selected in the multi-media catalogue (D) on the order (5) list before the setup of a telecommunication connection to the network server (10).

5           11. System as defined in claim 9 or 10, characterised in that the terminal (PC) comprises means (3) for setting up a telecommunication connection from the terminal (PC) to a server (A) providing additional information about a product.

10           12. System as defined in any one of claims 9 - 11, characterised in that the terminal (PC) comprises sound reproduction means (13) for presenting audio information to the user.

15           13. System as defined in any one of claims 9 - 12, characterised in that the system comprises means (6) for transferring the task of charging the customer for an ordered product via the telecommunication network (1) to the bank server (B).

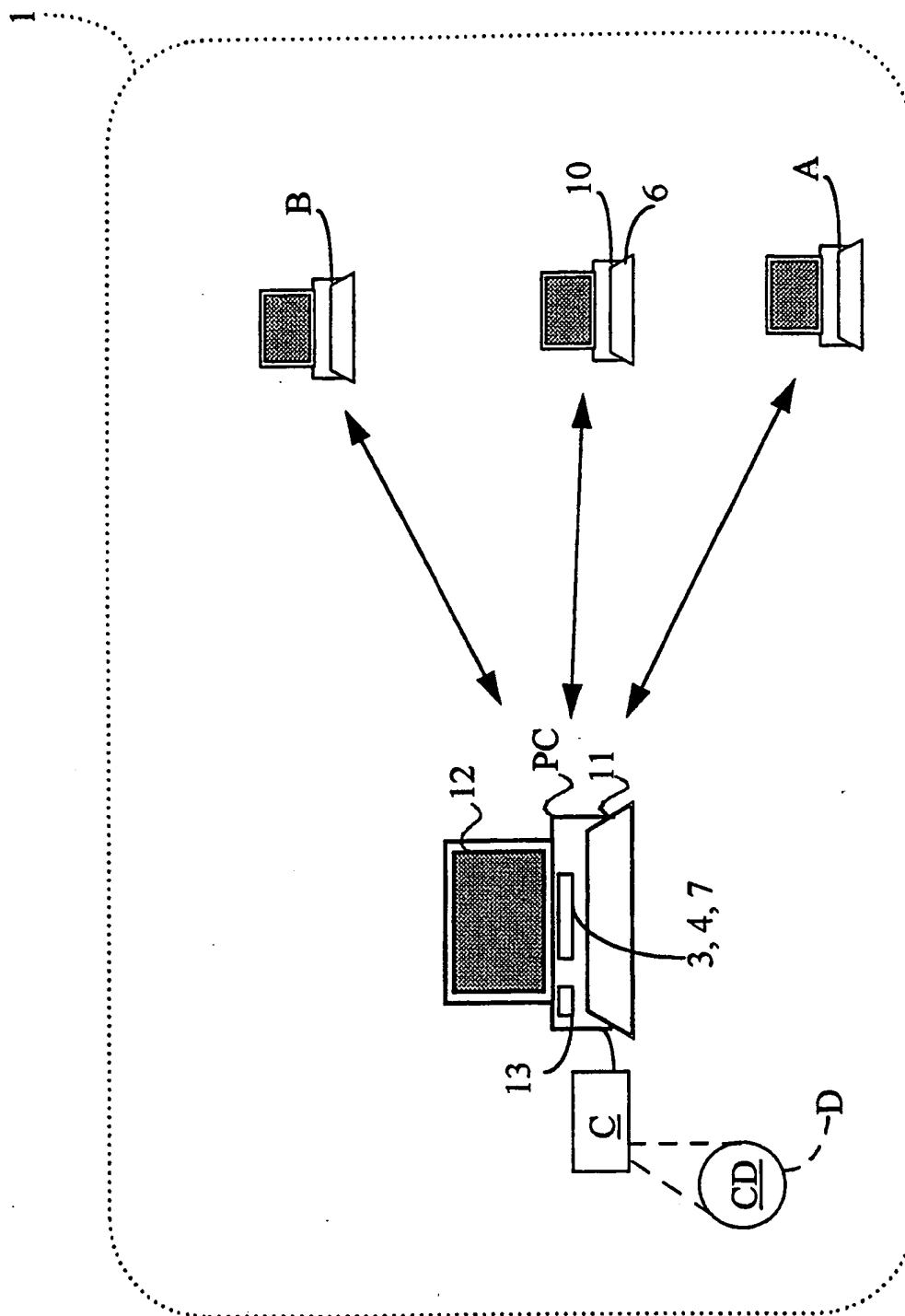


Fig. 1



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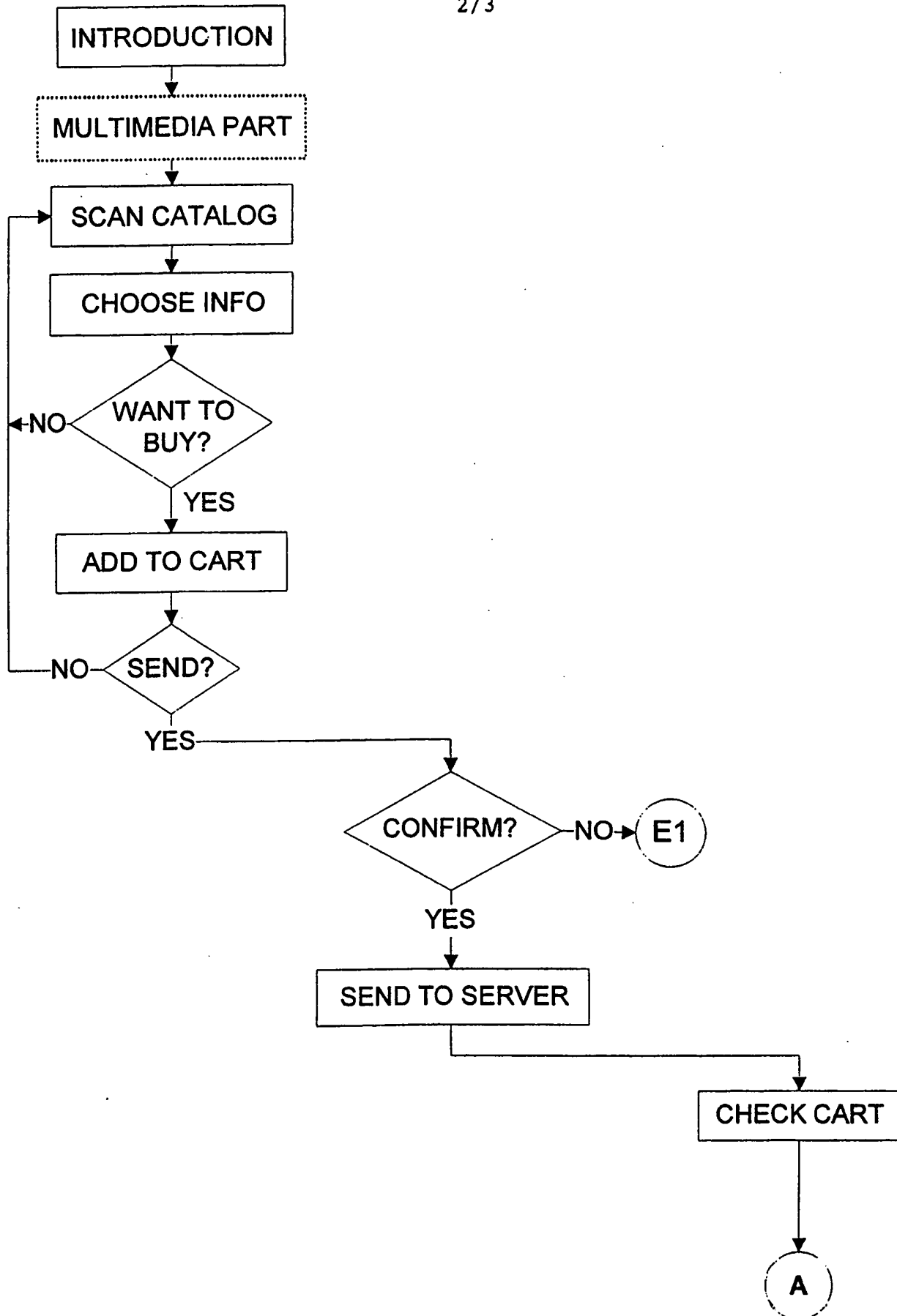


Fig. 2a

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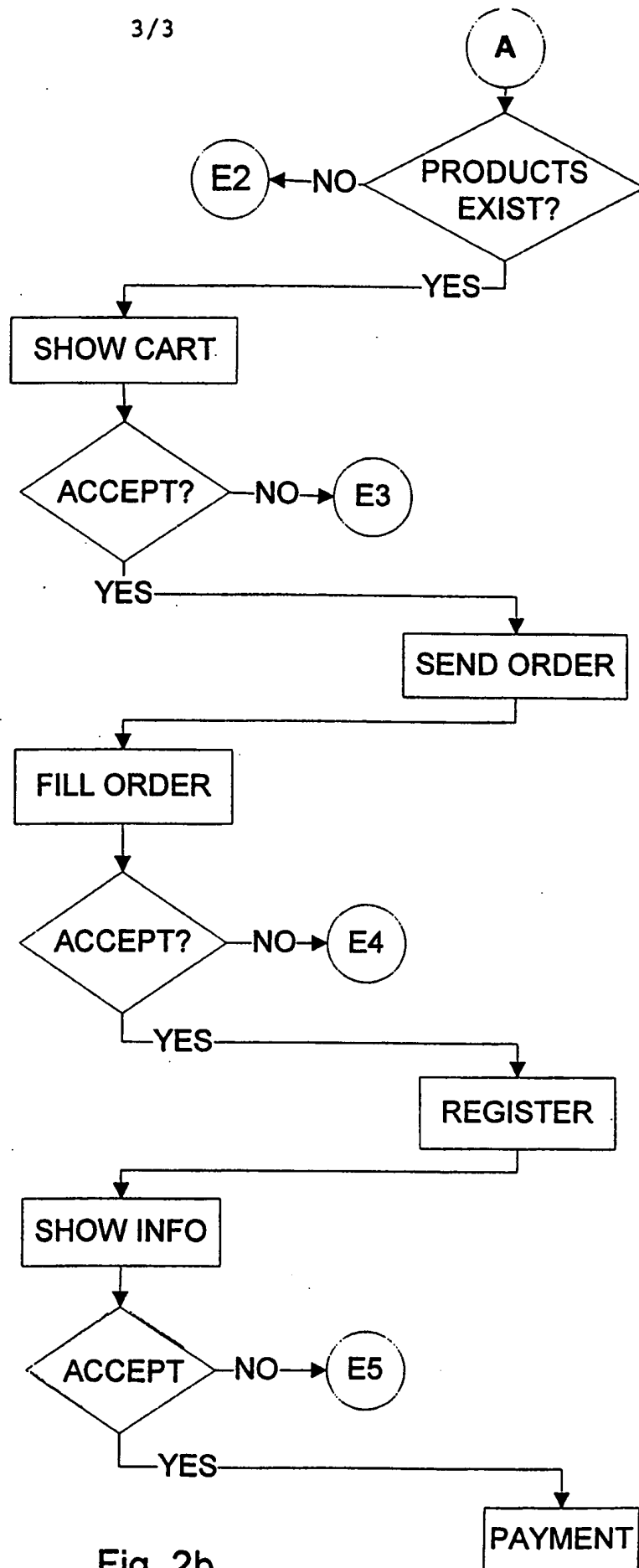


Fig. 2b

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 98/00546

## A. CLASSIFICATION OF SUBJECT MATTER

IPC6: G06F 12/08, G06F 17/30 // G06F 17/60

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DIALOG, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0847020 A2 (TSIRIGOTIS, PANAGIOTIS), 10 June 1998 (10.06.98), see whole document --	1-13
A	JP 9054801 A (HITACHI LTD), 25 February 1997 (25.02.97), see whole document --	1-13
A	US 5710887 A (RAMAN CHELLIAH ET AL), 20 January 1998 (20.01.98), see whole document --	1-13
A	JP 9330354 A (MIYAKO SERAMARUCHI MEDIA CORP KK), 22 December 1997 (22.12.97), see whole document --	1-13

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 98/00546

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 8037562 A (SONY CORP), 6 February 1996 (06.02.96), see whole document  -- -----	1-13

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

02/03/99

International application No.

PCT/FI 98/00546

Patent document cited in search report			Publication date	Patent family member(s)	Publication date
EP	0847020	A2	10/06/98	NONE	
JP	9054801	A	25/02/97	NONE	
US	5710887	A	20/01/98	NONE	
JP	9330354	A	22/12/97	NONE	
JP	8037562	A	06/02/96	NONE	